AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Original) A tone control method in a printing machine wherein calculations are executed on control quantities such as an ink key opening and an ink source roller rotation speed, on the basis of prescribed positions in a target print matter and the actual positions in the actually printed matter, said actual positions being corresponding to said prescribed positions, which comprises the steps of:

calculating dot area rate in said target print matter, on the basis of an upstream process data;

selectively integrating and averaging along a paper transport direction within a ink key width calculated process dot area rate greater than a prescribed threshold and spectral reflection rate in said actually printed matter;

calculating said ink key opening and said ink source roller rotation speed, on the basis of said dot area rate and said spectral reflection rate obtained by said selective integrating and averaging.

2.   (Original) The tone control method according to claim 1, wherein said prescribed positions in said target print matter and said actual positions in said actually printed matter are determined correspondingly with each other in such a manner that: one or more template images are generated, on the basis of said upstream process data and one or more matching images are generated, on the basis of said upstream process data; and

a template matching is executed by using said template images and said matching images.

3.   (Currently Amended) The tone control method according to claim 1 ~~or 2~~, wherein weights are lent on a result of said elective integration and averaging , corresponding to said dot area rate.

4.   (Currently Amended) The tone control method according to ~~one of claims 1 through 3~~ claim 1, wherein:
standard single color spectral dot densities at a prescribed area rate Dc (λ), Dm (λ), Dy (λ) and Dk (λ) for cyan (C), magenta (M), yellow (Y) and balck (K), respectively, at a wavelength λ are defined;
ink contents tc, tm, ty and tk for cyan (C), magenta (M), yellow (Y) and balck (K), respectively, at said wavelength λ are defined;
mixed color spectral dot density D (λ) is defined for said wavelength λ;
a multiple regression calculation is executed by using formula (1), on the basis of said process dot area rate and said spectral reflection rate averaged by said selective integration and averaging;
said ink contents tc, tm, ty and tk are calculated; and
calculating said ink key opening and said ink source roller rotation speed.

5.   (Currently Amended) The tone control method according to ~~one of claims 1 through 4~~ claim 1, wherein, when an ink content is varied from a prescribed threshold:

a water source roller rotation speed and a fluctuation of a going and returning roller are controlled; or

an alarm is generated for promoting an exterior to check said water source roller rotation speed and said fluctuation of a going and returning.

$$\begin{bmatrix} D_{(\lambda 380m)} \\ D_{(\lambda 390m)} \\ M \\ D_{(\lambda 860m)} \end{bmatrix} = \begin{bmatrix} Dc_{(\lambda 380m)} & Dm_{(\lambda 380m)} & Dy_{(\lambda 380m)} & Dk_{(\lambda 380m)} \\ Dc_{(\lambda 390m)} & Dm_{(\lambda 390m)} & Dy_{(\lambda 390m)} & Dk_{(\lambda 390m)} \\ & & M & \\ Dc_{(\lambda 860m)} & Dm_{(\lambda 860m)} & Dy_{(\lambda 860m)} & Dk_{(\lambda 860m)} \end{bmatrix} \begin{bmatrix} tc \\ tm \\ ty \\ tk \end{bmatrix}$$

6.   (Original) A tone control apparatus in a printing machine which comprises:

an ink key control means for controlling an ink key opening in said printing machine;

an ink source roller control means for controlling an ink source roller rotation speed;

an upstream digital data memory for storing process data made at an upstream;

a spectral reflection rate data memory for storing spectral reflection rate data measured from a sample printed by said printing machine;

a calculation unit; and

a control apparatus for instructing said ink key control means and said ink source roller to control said tone,

by making said calculation unit calculate dot area rate along a paper transport direction per a width of said ink key on the basis of said upstream digital data,

making said calculation unit execute a selective integral and averaging of said dot area rate calculated on the basis of said process data stored in said upstream digital data memory and said

dot area rate in an actually printed matter along said paper transport direction per said with of said ink key,

making said calculation unit calculate control quantities such as said ink key opening and said ink source roller rotation speed in said printing machine, on the basis of said dot area rate and said spectral reflection rate obtained by said selective integral and averaging.

7.   (Original) The tone control apparatus according to claim 6, which further comprises:

a template image memory for storing a template image selected and generated by said control apparatus on the basis of said upstream digital data; and

a matching image memory for storing a matching image selected and generated by said control apparatus on the basis of said spectral reflection rate measured from said sample,

wherein said control apparatus executes a matching of said matching image with said template image and calculates a positional relation between said upstream data and said sample printed by said printing machine.